What is claimed is:

1. A method for adjusting a multi-beam source unit, the multi-beam source unit including a multi-beam laser diode capable of emitting multi-laser beams from a plurality of light emitting points and a collimator lens for collimating the multi-laser beams, the multi-laser diode having a stem formed with a cutout portion, the multi-beam source unit being designed so as to be set to a scanning optical system on the assumption that the plural light emitting points are arranged in the direction of a predetermined standard design line when they are present on a virtual straight line defined by said cutout portion,

the method comprising measuring an arranged state of the light emitting points with respect to the standard design line on the basis of beam spots on an image surface corresponding to an image recording surface and rotating the multi-beam laser diode about an optical axis of the scanning optical system to align the arrangement direction of the light emitting points with the direction of the standard design line.

2. A method for adjusting a multi-beam source unit according to claim 1, wherein the virtual straight line is defined by a concave or convex portion as an engaging portion for positioning formed in the stem.

3. A method for adjusting a multi-beam source unit according to claim 1 or claim 2, wherein on the image surface corresponding to the image recording surface an arrangement direction of the light emitting points with respect to the standard design line is determined on the basis of a straight line obtained by joining two beam spots corresponding to two light emitting points located remotest from each other out of the light emitting points.

4. A method for adjusting a multi-beam source unit according to claim 1 or claim 2, wherein on the image surface corresponding to the image recording surface there are measured relative positions of beam spots corresponding to the

light emitting points to determine an approximate straight line on which the light emitting points can be regarded as being present, and an arrangement direction of the light emitting points is determined by the approximate straight line.

5. A method for adjusting a multi-beam source unit according to claim 4, wherein the approximate straight line is obtained by a method of least squares.

6. A method for adjusting a multi-beam source unit according to claim 1 or claim 2, wherein, on the image surface corresponding to the image recording surface, relative positions in the horizontal scanning direction of beam spots corresponding to the light emitting points are measured in terms of relative angle positions with respect to the standard design line to determine a maximum deviation in the horizontal scanning direction among the beam spots, then the multi-beam laser diode is rotated to measure relative positions of the beam spots in the horizontal scanning direction at different relative angle positions, thereby determining a maximum deviation in the horizontal scanning direction among the beam spots, these operations are repeated to measure an arranged state of the light emitting points, and an arrangement direction of the light emitting points is determined by a relative angle position corresponding to the smallest maximum deviation.

7. A method for adjusting a multi-beam source unit according to claim 1 or claim 2, wherein the arrangement direction of the light emitting points is substantially parallel to the vertical scanning direction.

8. A method for adjusting a multi-beam source unit according to claim 1 or claim 2, wherein the multi-beam source unit is provided with a base member, the base member supporting the multi-beam laser diode rotatably and having a fitting cylinder which defines a rotational center, the multi-beam source unit is also provided with a mounting bracket to be mounted to a body portion of an image forming apparatus, the mounting bracket having a horizontal scanning direction

reference plane to be confronted with a horizontal scanning direction reference plane formed in the body portion of the image forming apparatus and also having a fitting hole to be fitted on the fitting cylinder, the multi-beam source unit is further provided with an engaging piece for engagement with an engaging portion for positioning and a pressing spring piece for pressing the stem, the engaging piece being brought into engagement with the engaging portion for positioning, and the base member being rotated while being supported by the mounting bracket to adjust the arrangement direction of the light emitting points substantially in parallel with the vertical scanning direction.

9. A multi-beam source unit adjusting device comprising:

a base member adapted to be positioned and fixed, the base member being provided with a multi-beam laser diode having a plurality of light emitting points and capable of emitting multi-laser beams and also provided with a collimator lens for collimating the multi-laser beams;

an image pickup device on which the multi-laser beams are projected for measuring an arrangement direction of the light emitting points on the basis of beam spots and for rotating the multi-beam laser diode about an optical axis of an optical system; and

a focusing lens disposed between the image pickup device and the collimator lens to condense and focus the multi-laser beams onto an image pickup surface of the image pickup device,

wherein a front-side focal position of the focusing lens is substantially coincident with a rear-side focal position of the collimator lens.

10. A muti-beam source unit adjusting device according to claim 9, wherein the image pickup device is a CCD camera and the focusing lens is disposed so that a focused area of a beam spot of each multi-laser beam on an image pickup surface of the CCD camera is ten times or more as large as a pixel area.

11. A muti-beam source unit adjusting device according to claim 9, wherein for controlling in such a manner as to give substantially equal respective outputs of the multi-laser beams there is provided a control circuit which controls luminous outputs of N number of light emitting points so that the sum total of outputs of the light emitting points is N times as large as a detected outputs of one of the laser beam from any one of the N number of light emitting points.

12. A multi-beam source unit adjusting device according to claim 9, wherein a central position of each of the beam spots is a centroid position of a CCD pixel output corresponding to the beam spot.

13. A multi-beam source unit adjusting device according to claim 12, wherein the centroid position of each of the beam spots is determined by subtracting 1/e of a maximum value of the CCD pixel output and performing calculation using a CCD pixel output larger than zero.

14. A method for assembling a multi-beam source unit, the multi-beam source unit including a multi-beam laser diode capable of emitting multi-laser beams from a plurality of light emitting points, the multi-beam laser diode having a stem formed with a cutout portion, the multi-beam source unit also including a collimator lens for collimating the multi-laser beams, the multi-beam source unit being designed so as to be set to a scanning optical system on the assumption that the light emitting points are arranged in the direction of a predetermined standard design line when they are present on a virtual straight line defined by said cutout portion, the method comprising:

a fixing step of positioning the multi-beam laser diode to a base member, the base member supporting the multi-beam laser diode rotatably and having a fitting cylinder which defines a rotational center, and fixing the multi-beam laser diode with use of a pressing spring piece;

a positioning step of positioning the collimator lens with respect to the

multi-beam laser diode;

a calculating step of measuring spot positions of the laser beams emitted from the multi-beam laser diode and calculating central positions thereof; and

a rotation adjusting step of adjusting the rotation of the base member with the multi-beam laser diode attached thereto in such a manner that the direction of arrangement of the beam spots is aligned with the standard design line direction.